

REMARKS/ARGUMENTS

Specification Amendments

With respect to the priority statement, the Applicant made the suggested amendments.

With respect to the paragraph at page 4, lines 16-21, the Applicant added numerals to the figure and clarifying text to the paragraph, rather than amend the text to identify the input 132 and output 134 with the phrase "(not shown)".

35 USC 102/103

The Office rejected claims 12-14 and 18 as being anticipated and/or obvious over Laroussi (US 5876663). The Applicant disagrees, especially in view of the amendments herein.

As currently amended, Claim 12 clarifies that the waste is treated without subjecting the waste directly to the plasma, and Claims 13-14 and 18 are amended by virtue of their dependence on claim 12. Laroussi teaches exactly the opposite, namely the waste flowing through a container that subjects the waste directly to the plasma. That difference is quite substantial. Among other things, the currently claimed indirect contact between the waste and the waste avoids fluid contamination by NO_x and other chemicals generated by the plasma, and this is especially true since Laroussi apparently uses air for plasma generation.

In addition, claim 18 recites that the plasma wave generator operates a basic frequency of 0.44 MHz – 40.56 MHz. Laroussi uses a steady-state glow discharge operating at 1 – 10 KHz, which is .001 - .01 KHz.. Given (a) the infinite number of permutations in parameters of plasma wave generators, and (b) the complete lack of teaching in Laroussi as to how one would select one plasma wave generator over another, the current Applicant's selection of the claimed generator is neither a mere design choice among a small finite number of choices, nor mere optimization that would have been within the scope of one of ordinary skill in the art.

Still further, claim 18 recites that the plasma wave generator operates at a modulation frequency of 10-35 kHz, in other words the claimed generated uses a pulsed discharge. Here again, the current Applicant's selection of the claimed generator is neither a mere design choice among a small finite number of choices, nor mere optimization that would have been within the scope of one of ordinary skill in the art.


Other Claims variously recite that the method of claim 1 is applicable to discharging the treated waste into a navigable body of water (Claim 15), a sewer (Claim 16), a municipal waste treatment plant (Claim 17), and a ship (Claim 20). Those Claims have now all been amended to clarify that the method operates upon a commercially realistic quantity of waste, namely at least 20 l/hr. Laroussi can't do that. Unlike the current invention which can handle 20 – 2,000 or more l/hr (P5/L1-3) with residence time of less than one second, Laroussi's devices have a residence time of up to 10 minutes (C2/L60-62). Those enormously different numbers result from the use of due to the use of a "cold" pulsed discharge plasma rather than a "hot" steady state glow discharge.

Conclusion

Claims 12-20 are pending in this application. Claims 1-11 are withdrawn. The applicant requests speedy issuance of the notice of allowance.

Respectfully submitted,
Fish & Associates, PC

By



Robert D. Fish
Reg. No. 33880

Fish & Associates, PC
2603 Main Street, Suite 1050
Irvine, CA 92614-6232
Telephone (949) 253-0944
Fax (949) 253-9069